A CHECKLIST OF THE MACROINVERTEBRATES OF THE PROVO RIVER, UTAH

Parley V. Winger,[1] Edward J. Peters,[1] Michael J. Donahoo,[1]
James R. Barnes,[1] and David A. White[1]

Abstract.— A checklist of the aquatic macroinvertebrate species from the Provo River, Utah, was compiled from field collections and from literature sources.

Recent water control activities and proposed developments along the Provo River in Provo Canyon have served to stimulate research on aquatic life in this river. Many studies of aquatic life deal either directly or indirectly with the aquatic insects in the stream. Previous studies of aquatic insects in the Provo River are either unpublished theses or incidental references in papers of a broader scope (Edmunds, 1952). The most complete studies were conducted by Gaufin (1949, 1951, 1959).

Students at the University of Utah studied the Trichoptera (Merkley, 1948), aquatic Coleoptera (Todd, 1952), Chironomidae (Brooks, 1955), and Plecoptera (Sessions, 1960) of the Provo River.

Incidental references to the species of aquatic insects were made by Needham and Christensen (1927), Hazzard (1934), Moffet (1936), Chandler (1941), Tanner (1941), Anonymous (1948), Dunstan (1951), Anderson (1960), Musser (1961), and Braithwaite (1962).

The present study was conducted during the winter of 1969-70. Collections were taken from 10 stations located along the Provo River from 5½ miles above Woodland, Utah, downstream to the U. S. 91 highway bridge in Provo, Utah.

The main purpose of this paper is to make available, in one place, a complete list of the aquatic invertebrates which have been collected from the Provo River. Table 1 lists all organisms collected during the present study and from previous pertinent studies (Merkley, 1948; Gaufin, 1951; Todd, 1952; Gaumer, 1952; Brooks, 1955; Sessions, 1960; Gaufin, Nebeker, and Sessions, 1966).

The collection of *Sialis* sp. (Sialidae) has not, as far as we know, been previously reported in the literature for northern Utah. In this study, immatures of *Sialis* were collected on several occasions in the Provo River downstream from Woodland, Wasatch Co., Utah. One specimen of *Sialis* has been collected from Hobble Creek, east of Springville, Utah Co., Utah. Dr. Arden R. Gaufin, University of Utah (Pers. Comm., 1972), has collected *Sialis* from the Weber, Provo, and Bear rivers.

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[1]Department of Zoology, Brigham Young University, Provo, Utah 84601.

in this study. Thanks are also due to Dr. Roy T. Sawyer, College of Charleston, Charleston, South Carolina, who identified the Hirudinea.

TABLE 1. Checklist of the Macroinvertebrates of the Provo River, Utah. (Parentheses around number indicates specimens not classified to species. 1 = present study; 2 = Gaufin, 1951; 3 = Merkley, 1948; 4 = Sessions, 1960; 5 = Todd, 1952; 6 = Brooks, 1955; 7 = Gaufin, Nebeker, and Sessions, 1966; 8 = Gaumer, 1952; 9 = Edmunds, 1952.)

ORGANISM	COLLECTOR
Collembola	2
Coleoptera	
Caraboidea	
Amphizoidae	
Amphizoa lecontei Matthews	5
Dytiscidae	
Bidessus affinis (Say)	5
Hydroporus planiusculus Fall	(2), 5
Hydroporus pervicinus Fall	5
Hydroporus occidentalis Sharp	5
Hydroporus transpunctatus Chandler	
Hygrotus masculinus (Crotch)	5
Hygrotus patruelis (LeConte)	5
Hygrotus tumidiventris (Fall)	5
Laccophilus decipiens LeConte	5
Laccophilus astristernalis Crotch	5
Oreodytes crassulus (Fall)	5
Oreodytes congruus (LeConte)	5
Agabus cordatus (LeConte)	5
Agabus hypomelas Mannerheim	5
Agabus seriatus intersectus Leech	5
Agabus oblongus Fall	5
Agabus approximatus Fall	5
Agabus austini Sharp	5
Agabus strigulosis (Crotch)	5
Agabus kenaiensis Fall	5
Agabus erichsoni Gemminger & Harold	5
Agabus tristis Aubé	5
Ilybius subaenus Erickson	5
Ilybius fraterculus LeConte	5
Rantus divisus (Aubé)	5
Rantus longipes Sharp	5
Rantus hoppingi Wallis	5
Dytiscus marginicollis LeConte	5
Dytiscus dauricus Gebl.	(1), (2), 5
Dytiscus circumsinctus Ahrens	5
Acilius semisulcatus Aubé	5
Cybister explanatus LeConte	5
Haliplidae	
Brychius horni Crotch	5
Haliplus immaculicollis Harris	(1), (2), 5
Haliplus lecchi Wallis	5
Peltodytes callosus (LeConte)	5
Gyrinoidea	
Gyrinidae	
Gyrinus bifarius Fall	5
Gyrinus consobrinus LeConte	5

Table 1. (Continued)

Gyrinus pleuralis Fall	5
Gyrinus picipes Aubé	5
Gyrinus affinis Aubé	5
Hydrophiloidea	
Hydrophilidae	
Helophorus oblongus LeConte	(2), 5
Helophorus obscurus LeConte	5
Telophorus nitidulus LeConte	5
Berosus infuscatus LeConte	5
Berosus styliferous Horn	5
Hydrous triangularis (Say)	5
Tropisternus ellipticus (LeConte)	5
Tropisternus dorsalis (Brullé)	5
Tropisternus californicus (LeConte)	5
Hydrobius fuscipes Linnaeus	(2), 5
Hydrobius scabrosus Horn	5
Paracymus subcuprens (Say)	5
Crepitis moratus (Horn)	5
Helochares maculicollis Mulsant	5
Enochrus hamiltoni (Horn)	5
Enochrus conjunctus (Fall)	5
Dryopoidea	
Dryopidae	
Helichus striatus LeConte	(1), 2, 5
Elmidae	
Elmis ornata Schaffer	5
Heterlimnius quadrimaculatus (Horn)	(1), 2, 5
Heterlimnius corpulentus (LeConte)	2, 5
Narpus concolor (LeConte)	5
Narpus angustus Casey	2
Simsonia quadrinotata (Say)	5
Zaitzevia parvulus (Horn)	(1), 2, 5
Microcylloepus pusillus LeConte	2
Diptera	
Chironomidae	(1)
Calospectra sp.	6
Chironomus sp.	2
Diamesa sp.	6
Harnischia sp.	6
Hydrobaenus sp.	6
Cricotopus sp.	6
Corynoneura sp.	6
Psilodiamesa sp.	6
Syndiamesa sp.	6
Pentaneura sp.	2, 6
Tendipes sp.	6
Tanytarsus sp.	2
Procladius sp.	2
Spaniotoma sp.	2
Tipulidae	
Antocha sp.	1, 2
Eriocera sp.	2
Dicranota sp.	2
Hexatoma sp.	1, 2
Pedicia sp.	2
Holorusia sp.	2
Phalacrocere sp.	2
Tipula sp.	1, 2
Rhaphidolabis sp.	2

Table 1. (Continued)

Psycodidae	
Pericoma sp.	1, 2
Empididae	
Hemerodromia sp.	2
Roederiodes sp.	2
Simuliidae	
Simulium sp.	1, 2
Tabanidae	
Chrysops sp.	2
Dixidae	
Dixa sp.	2
Rhagionidae	
Atherix variegeta Walker	1, 2
Muscidae	
Limnophora aequifrons Stein	2
Heleidae	
Palpomyia sp.	2
Stratiomyiidae	
Euparyphus sp.	2
Odontomyia sp.	2
Deuterophlebiidae	
Deuterophlebia sp.	2
Blepharoceridae	
Agathon sp.	1
Blepharicera sp.	2
Ephemeroptera	
Baetidae	
Baetis bicaudatus Dodds	2
Baetis intermedius Dodds	2
Baetis tricaudatus Dodds	1, 2
Callibaetis fuscus Dodds	9
Ephemerellidae	
Ephemerella coloradensis Dodds	2
Ephemerella doddsi Needham	1, 2
Ephemerella grandis grandis Eaton	1, 2
Ephemerella hecuba (Eaton)	2
Ephemerella inermis Eaton	1, 2
Ephemerella infrequens McDunnough	2
Ephemerella maragrita Needham	9
Ephemerella tibialis McDunnough	2
Heptageniidae	
Cinygmula mimus (Eaton)	9
Cinygmula par (Eaton)	9
Epeorus (Iron) *albertae* (McDunnough)	2
Eperous deceptivus (McDunnough)	2
Epeorus longimanus (Eaton)	2
Epeorus sp.	2
Heptagenia criddlei McDunnough	2
Heptagenia solitaria McDunnough	1, 2
Heptagenia elegantula (Eaton)	2
Rhithrogena doddsi McDonnough	9
Rhithrogena morrisoni (Banks)	9
Rhithrogena robusta Dodds	9
Siphlonuridae	
Ameletus oregonensis McDunnough	1
Ameletus velox Dodds	2
Ameletus sp.	1

Table 1. (Continued)

Siphlonurus occidentalis Eaton	2
Parameletus columbiae McDunnough	9
Leptophlebiidae	
Paraleptophlebia debilis (Walker)	2
Paraleptophlebia heteronea (McDonnough)	1, 2
Paraleptophlebia memorialis Eaton	9
Paraleptophlebia packi (Needham)	
Tricorythidae	
Tricorythodes minutus minutus Traver	1, 2
Plecoptera	
Chloroperlidae	
Alloperla pallidula (Banks)	(1), 2, 4, 7
Alloperla borealis (Banks)	4, 7
Alloperla lamba Needham and Cleasen	2, 7
Alloperla pintada Ricker	4, 7
Alloperla coloradensis (Banks)	4, 7
Alloperla severa (Hagen)	4, 7
Alloperla signata (Hagen)	4, 7
Paraperla frontalis Banks	4, 7
Utaperla sopladora Ricker	4, 7
Nemouridae	
Brachyptera nigripennis (Banks)	1, 2, 4, 7
Brachyptera pacifica (Banks)	2, 4, 7
Brachyptera pallida (Banks)	1, 7
Capnia confusa Claassen	1, 4, 7
Capnia columbiana Claassen	2, 4, 7
Capnia gracilaria Claassen	4, 7
Capnia lemoniana Nebeker and Gaufin	7
Capnia ligulata Hansen	7
Capnia logana Nebeker and Gaufin	7
Capnia nana wasatchae Claassen	7
Capnia uintahi Gaufin	7
Eucapnopsis brevicauda (Claassen)	4, 7
Paraleuctra occidentalis (Banks)	2, 7
Paraleuctra sara (Claassen)	(2), 4, 7
Isocapania crinata (Needham and Claassen)	7
Isocapania grandis (Banks)	7
Nemoura californica Claassen	(1), 4, 7
Nemoura cinctipes Banks	2, 4, 7
Nemoura columbiana Claassen	4, 7
Nemoura besametsa Ricker	1, 2, 4, 7
Nemoura oregonensis Claassen	2, 4, 7
Nemoura haysi Ricker	7
Perlomyia utahensis Needham and Claassen	7
Perlidae	
Acroneuria pacifica Banks	1, 2, 4, 7
Claassenia sabulosa (Banks)	1, 2, 4, 7
Perlodidae	(1), 2, 4, 7
Arcynopteryx signata (Hagen)	1, 4, 7
Arcynopteryx parallela (Frison)	2, 4, 7
Isogenus aestivalis (Needham and Claassen)	7
Isogenus modestus (Banks)	(1), (2), 4, 7
Isoperla ebria (Hagen)	1, 2, 4, 7
Isoperla fulva Claassen	4, 7
Isoperla mormona Banks	2, 4, 7
Isoperla patricia Frison	4, 7
Isoperla pinta Frison	4, 7
Diura knowltoni (Frison)	4, 7

Table 1. (Continued)

Pteronarcidae	
Pteronarcys californica Newport	1, 2, 4, 7
Pteronarcella badia (Hagen)	1, 2, 4, 7
Trichoptera	
Brachycentridae	
Brachycentrus aspolus Ross	3
Brachycentrus americanus (Banks)	1
Brachycentrus occidentalis (Banks)	2, 3
Brachycentrus sp.	1, 2, 3
Micrasema bactro Ross	2, 3
Helicopsychidae	
Helicopsyche borealis (Hagen)	1, 2, 3
Hydropsychidae	
Arctopsyche grandis (Banks)	(1), 2, 3
Cheumatopsyche analis (Banks)	(2), 3
Hydropsyche californica Banks	(1), (2)
Hydropsyche cockerelli Banks	3
Hydropsyche occidentalis Banks	3
Hydropsyche oslari Banks	3
Parapsyche elsis Milne	2, 3
Pycnopsyche sp.	3
Hydroptilidae	
Agraylea multipunctata Curtis	3
Agraylea saltesea Ross	3
Hydroptila consimilis Morton	3
Hydroptila sp.	(2), 3
Neotrichia panneus Denning	3
Neotrichia sp.	2
Ochrotrichia atylata Ross	3
Ochrotrichia logana (Ross)	2
Tascobia brustia (Ross)	2, 3
Lepidostomatidae	
Lepisostoma pluviale (Milne)	(2), 3
Lepisostoma unicolor (Banks)	3
Lepisostoma podager (McLachlan)	3
Lepisostoma cascadense (Milne)	3
Leptoceridae	
Oecetis sp.	1, 2, 3
Limnephilidae	
Chyranda centralis (Banks)	3
Dicosmoecus atripes (Hagen)	(2), 3
Dicosmoecus unicolor (Banks)	3
Hesperophylax consimilis (Banks)	(1), 2, 3
Limnephilus arizona Ross	2, 3
Limnephilus sp.	(1), 3
Neophylax sp.	2
Neothremma alicia Banks	(1), 3
Oligophlebodes minutus (Banks)	3
Philoptomidae	
Dolophilus garbriella (Banks)	2, 3
Trentonius aequalis (Banks)	2, 3
Chimarra sp.	2
Psycomyiidae	
Psychomyea flavida Hagen	3
Tinodes sp.	3
Rhyacophilidae	
Anagapetus debilis Ross	3
Glossosoma alascense Banks	(1), 3

Table 1. (Continued)

Glossosoma parvulum Banks	2, 3
Glossosoma verdona Ross	3
Rhyacophila acropedes Banks	(1), (2), 3
Rhyacophila angelita Banks	3
Rhyacophila coloradensis Banks	3
Rhyacophila harmstoni Ross	3
Rhyacophila hyalinata Banks	3
Rhyacophila lobifera Betten	1
Rhyacophila pellisa Ross	3
Rhyacophila verrula Milne	3
Hemiptera	
Corixidae	1, 2
Gerridae	1, 2
Mesoveliidae	1, 2
Saldidae	1
Belostomatidae	1
Odonata	
Coenagrionidae	1, 2
Aeshnidae	1
Aeshna palmata Hagen	*
Corduliidae	
Somatochlora semicircularis Selys	*
Megaloptera	
Sialidae	
Sialis sp.	1
Crustacea	
Cladocera	
Daphnia sp.	1
Amphipoda	
Gammarus sp.	1, 2
Hyallella azteca (Saussure)	2
Isopoda	
Asellus tomalensis Harford	1
Hydracarina	
Atractides sp.	1, 2
Calonyx sp.	8
Eylais sp.	8
Hydryphantes sp.	8
Hygrobates sp.	8
Laminipes sp.	8
Lebertia sp.	8
Limnesia sp.	8
Megapus sp.	8
Panisus sp.	8
Piona sp.	8
Sperchon sp.	8
Testudacarus sp.	8
Oligochaeta	1, 2
Hirudinea	2
Cystobranchus verrilli Meyer	1
Dina dubia Moore and Meyer	1
Dina parva Moore	1
Eropbdella punctata (Leidy)	1
Helobdella stagnalis (Linnaeus)	1
Nephelopsis obscura Verrill	1

Turbellaria	1, 2
Polycelis sp.	**
Nematoda	1, 2
Mollusca	
Physdae	
Physa sp.	1
Planorbidae	
Gyraulus sp.	1
Lymnaeidae	
Lymnaea sp.	1
Bulimidae	
Fluminicola sp.	1
Ancylidae	
Ferrissia sp.	1
Sphaeriidae	
Sphaerium sp.	1, 2

*Musser, 1961.
**Braithwaite, 1962.

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